

What is Claimed is:

1. A gas generator (1, 46) comprising;
a squib (10) having a plug (24) having a header part (45) and two or more electrode pins (22, 23), and a thin-film bridge (25) having electrode pads (41, 42),
wherein the thin-film bridge (25) is activated to ignite ignition charge (26, 27), when an electric current is supplied to the thin-film bridge (25) via the electrode pins (22, 23),
the gas generator wherein the thin-film bridge (25) of squib (10) is arranged into a hollow (32) prepared at the plug (24) in such a manner that the thin-film bridge (25) is kept approximately on a level with the head (35) of the electrode pins (22, 23) and the header part (45) of the plug (24), the thin-film bridge (25) is connected by wire bonding to the electrode pins (22, 23) at the electrode pad parts (41, 42), and at least either of the electrode pad (41) or (42) of the thin-film bridge (25) is connected by the wire bonding to a metal part of the header part (45) of the plug (24).
2. The gas generator as set forth in claim 1 further comprising a housing (4) having therein a combustion chamber (6) in which gas generants (5) generating a high temperature gas by burning are sealed and a filter chamber (8) to which a filter member (7) is attached, wherein the gas generants (5) inside the

combustion chamber (6) are ignited and burnt by the squib (10).

3. The gas generator as set forth in claim 2, wherein the housing (4) is 30mm or less in an outer diameter and the squib (10) is attached to the one end (3) of the housing (4).

4. The gas generator as set forth in claim 2 or claim 3, wherein the housing (4) is in a closed-end cylindrical shape, which is opened at the one end (3) and closed at the other end (2).

5. The gas generator as set forth in claim 2 or claim 3, which is provided with a first partition member (9) dividing the combustion chamber (6) and the filter chamber (8).

6. The gas generator as set forth in claim 2 or claim 3, wherein the other end (2) of the housing (4) is in a bowl shape or in a flat-bottomed shape.

7. The gas generator as set forth in claim 2 or claim 3, wherein propellant (14) is sealed inside the combustion chamber (6).

8. The gas generator as set forth in claim 7, wherein the gas generants (5) and the propellant (14) are not loaded into a container but directly sealed into the combustion chamber (6), and the gas generants (5) and the propellant (14) are divided by a second partition member (47).

9. The gas generator as set forth in claim 5, wherein the

first partition member (9) is crimped and fitted into the housing (4) from the outer peripheral end surface thereof.

10. The gas generator as set forth in claim 1, further comprising;

a gas cylinder (51) having therein a compressed gas,

a housing (54) in which a propellant (52) and the squib (10) are housed,

an outer cylindrical member (55) connecting the gas cylinder (51) to the housing (54) and holding them,

wherein

the gas cylinder (51) having a rupture disk (66) for retaining the pressure and sealing the compressed gas at the end of it facing the housing (54),

the outer cylindrical member (55) having a filter member (57) mounted along the inner periphery of the outer cylindrical member (55), and

a gas retaining space (59) is formed between the gas cylinder (51) inside the outer cylindrical member (55) and the housing (54).

11. The gas generator as set forth in claim 10, wherein the gas cylinder (51) is in the range from 20mm to 30mm in outer diameter.

12. The gas generator as set forth in claim 10 or claim 11,

wherein the rupture disk(66) is ruptured by a force of flames from the squib (10).

13. The gas generator as set forth in claim 10 or claim 11, wherein a plurality of second flame discharging openings (60) toward the outer cylindrical member (55) are formed at a side cylindrical part (68) on the bottom (67) of the housing (54).

14. The gas generator as set forth in any one of claims 1, 2, 3, 8, 9, 10, or 11, wherein the surface of the electrode pads (41 and 42) are made of any one of gold, aluminum, nickel or titanium.

15. The gas generator as set forth in any one of claims 1, 2, 3, 8, 9, 10, or 11, wherein a wire (28) used in wire bonding is made of gold or aluminum and the wire (28) is in the range from 10 μ m to 500 μ m in diameter.

16. The gas generator as set forth in any one of claims 1, 2, 3, 8, 9, 10, or 11, wherein the wire (28) used in the wire bonding is 1mm or less in loop height (h3).